

Findings and Lessons Learned on the Delivery of Reproductive Health Care to the Rural Mayan Population of Guatemala from Operations Research and Diagnostic Studies, 1994-1997



Acknowledgements

The Population Council is grateful to Dr Kjell Enge, currently of Dickerson College and formerly country Representative in Guatemala, for his assistance in the development of this document. Dr Enge was closely involved in development of the research described here and developed the initial report from which this document was adapted.

The Population Council wishes to thank Dr Francisco Mendez from APROFAM for his contribution of the cover photograph.

Graphic Design and Layout by JuanCarlos Sagastume, Consultant

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We would appreciate receiving comments and suggestions from readers.

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This project was financed by the United States Agency for International Development (USAID/G-CAP) under Cooperative Agreement 520-0357-A-00-4169-00 and INOPAL III Operations Research and Technical Cooperation in Family Planning and Reproductive Health for Latin America and the Caribbean, Contract No CCP-95-C-00-0007-00

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The purpose of this report is not to repeat what has already been written but to reflect on the significance of the specific findings as lessons learned and make recommendations for further research and how best to use these lessons to provide better and more acceptable reproductive health and family planning services to the Mayan population

Section One *Lessons Learned*

I Introduction

Beginning in 1994, The Population Council's research activities in Guatemala have examined the reproductive health needs of the Mayan population. Specific projects have provided data on Mayan perceptions of sexuality, views on reproduction and birth spacing, experiences with health care service providers, and opinions on how reproductive health care and family planning services should be provided. The first three projects listed in the table below were designed as diagnostic studies and a fourth project with ATI provided additional in-depth data on women's views of family planning and how they would like to receive services. The diagnostic study with APROFAM in El Quiche focused exclusively on men and their views on reproductive health and family planning.

The other projects were designed to test specific strategies involving service delivery in clinics and communities, the integration of maternal child health services with reproductive health and family planning, the relative cost of different service delivery plans, and the use of bilingual teachers to promote reproductive health in their communities. To varying degrees, these projects included training of trainers, training of clinic and community personnel, in-service training of clinic and community providers, the design of training materials, the design and validation of service delivery guides, the design and validation of a wide range of educational materials, the testing of educational strategies, and the design and implementation of management information systems.

The detailed descriptions, outcomes, and summaries of principal findings have been included in reports to USAID and the Population Council. The purpose of this report is not to repeat what has already been written, but to reflect on the significance of the specific findings as lessons learned and to make recommendations for further research and how best to use these lessons to provide better and more acceptable reproductive health and family planning services to the Mayan population.

The lessons learned are presented in Section One in four parts: first, what people think, want and communicate, second, service provision in the community, third, services in the clinic, and fourth, a series of recommendations. Key findings from relevant projects are presented and discussed, and Table 1 on the next page has been included to serve as a guide to each project and its activities. A summary of each research project is found in Section two.

Table 1 Population Council Projects—1994 to 1997

Implementing Organization	Project Title and Duration	Activities
1 The Population Council (PC)	Diagnostic Study of Family Planning Services and Users/Non Users in the Mayan Highlands of Quetzaltenango (8 months)	DS
2 Universidad del Valle de Guatemala (UVG)	Study of Cognition and Speech Patterns of Urban and Rural Indigenous Community Residents About Reproductive Health in the Department of Quetzaltenango (9 months)	DS
3 APROFAM	Baseline Study of Reproductive Health Beliefs and Attitudes of Males in Four Health Districts in the Department of El Quiché (6 months)	DS
4 Project Concern International and Rxiiñ Tnamet (PCI/RT)	Increasing Knowledge and Skills of Reproductive Health Service Providers in Two Conservative Indigenous Communities on Lake Atitlán (12 months)	DS TOT THP TCoP
5 Rxiiñ Tnamet and Project Concern International (RT/PCI)	Testing Reproductive Health Service Delivery Strategies in Two Indigenous Communities on Lake Atitlán, Guatemala (14 months)	CS CoS CP FP RH HV MIS TOT THP, TCoP
6 APROFAM	Injectable Contraceptive Service Delivery Provided by Volunteer Community Promoters (27 months)	CS CoS CP FP RH HV MIS TOT THP TCoP
7 APROFAM	Reengineering the Community Based Distribution Program of APROFAM (25 months)	CoS CP FP HV MIS TOT TCoP
8 APROFAM	Designing and Testing Appropriate Health Education Strategies for Men in Four Health Districts in the Department of El Quiché (18 months)	CP FP RH
9 The Population Council and the Guatemalan Social Security Institute (PC/IGSS)	Integrated Obstetric, Family Planning and STD Training for Traditional Birth Attendants (TBAs) (22 months)	CS CoS CP FP RH HV MIS TOT THP TCoP
10 La Asociación Toto Integrado (ATI)	Testing the Collaboration Between Two NGOs ATI and APROFAM in the Delivery of Family Planning Services (12 months)	DS
11 The Population Council and MOH Quetzaltenango and San Marcos (PC/MOH)	Systematic Offering of Family Planning and Reproductive Health Services in Guatemala (30 months)	CS CP FPE RHE HV MIS TOT THP TCoP
12 The Population Council and MOH Quetzaltenango and San Marcos (PC/MOH)	Cost Analysis of Reproductive Health Services Provided by the Ministry of Health (14 months)	CA
13 Asociación Guatemalteca de Educación Sexual (AGES)	Reproductive Health Education in Indigenous areas through Bilingual Teachers in Guatemala (12 months)	FPE RHE CP
Key to project activity abbreviations	DS=diagnostic study CS=clinical services CoS=community services CA=cost analysis CP=community promotion FPE=family planning education RHE=reproductive health education, HV=home visits InST=in service training, MIS=management information system THP=training of health service personnel, TCoP=training of community personnel TOT=training of trainers	



It is not possible to generalize about Mayan willingness to discuss sexual matters and there exist significant variations both within and between different populations

The most common errors were exaggerated negative side-effects and the fear of becoming infertile

The important lesson to be learned is that the influence of religion on opinions about family planning methods and whether or not to use a method varies considerably among different Mayan groups

II Family Health - Communication, Desires and Opinions

Research findings were not always uniform across different populations of the Guatemalan highlands when couples were asked about their communication desires and opinions concerning reproductive health. For example, there is a taboo about discussing sexuality in Santiago but not in Ostuncalco. In Santiago couples parents children and adolescents rarely discussed sexual themes such matters are discovered after marriage. But the Mam speakers in Ostuncalco talked very freely about a wide range of sexual matters including homosexuality sexual behavior, reproduction and family planning. Based on the limited and contradictory data, it is not possible to generalize about Mayan willingness to discuss sexual matters and there exist significant variations both within and between different populations. However in the two groups that were studied there is interest in learning more about reproduction and fertility.

The studies show that many Mayans feel that the ideal number of children is four or less there should be at least two years between each child, and women who have many closely spaced children are much more prone to illness and have higher mortality rates. Community residents appear willing to accept the concept of birth spacing when there is a clear emphasis on improving health and the quality of family life. In addition, women are very aware of the poor quality of health services especially those provided by untrained birth attendants.

Most Mayan men and women were able to name a wide variety of family planning methods, but very few knew anything about use function and possible side-effects. On the other hand, misinformation about reproductive health was found everywhere and the most common errors were exaggerated negative side-effects and the fear of becoming infertile. Generally natural methods were found to be the most acceptable but very few Mayans knew anything about them. Community residents generally knew about family planning services available in their communities, but rumors and gross exaggeration about negative side effects were found to be the primary barriers to adoption.

In Santiago, modern methods of contraception were rejected by many women stemming from religious dogma both Catholic and evangelical. There are no reliable data on how widespread these opinions are but negative opinions are generally expressed more vocally than positive opinions and may appear to be more prevalent than they really are. However in Quetzaltenango and El Quiche religion appears to be much less important as a barrier. The important lesson to be learned is that the influence of religion on opinions about family planning methods and whether or not to use a method varies considerably among different Mayan groups.

The ideal volunteer should be a married woman with children a respected member of the community who is at least 25 years old preferably a family planning user

Men felt children would be better cared for and women would have less work By far the economic consequences of having too many children were at the forefront in the minds of men

Men wanted to learn more about sexuality reproduction health and family planning

The ATI women's discussion groups not only supported the conclusion that Mayan women want to know more about reproduction and birth spacing, but also generated a profile of the kind of person who should provide services in the community. These findings were supported by the APROFAM diagnostic study which covered most of the Highlands, indicating that this is a widespread view among Mayan women. Briefly, the ideal volunteer should be a married woman with children, a respected member of the community who is at least 25 years old, preferably a family planning user, she should speak the local language, be well trained in the treatment of a variety of health problems not just family planning, be accessible and have time to attend clients, she should understand the importance of confidentiality and have good interpersonal relations.

Men were found to know less about reproductive health than women but they were quite aware of the economic benefits of spacing their children. Also men felt children would be better cared for and women would have less work. By far, the economic consequences of having too many children were at the forefront in the minds of men and the health benefits of fewer children, especially for their wives, was rarely if ever mentioned. At the same time, men view themselves as the family decision makers in all aspects of domestic life, severely limiting women's choices and activities, especially the adoption of family planning methods.

Men wanted to learn more and expressed interest in group talks, movies and even home visits. There are clear opportunities for initiatives to work with men and to encourage them to become more informed about reproductive health and birth spacing.

Overall, these studies point to the interest of the Mayans to learn more about sexuality, reproduction, health and family planning but at the same time, most have very definite opinions about who should do the promotion and education and how reproductive health and family planning services should be delivered. Furthermore, many community residents, including leaders and TBAs, are interested in participating in both health promotion and service delivery. Therefore, any initiative should carefully consider these findings before spending time and financial resources designing interventions to provide health care services, education or promotion.



The volunteer promoters were pleased to see how their activities and services helped improve people's lives

Home visits were an effective strategy for increasing the adoption of both natural and modern family planning methods

There are many other kinds of incentives that can provide powerful motivation

III. Community Based Reproductive Health Services, Education and Referral

Community workers are the key to any program that promotes services, makes referrals and distributes family planning methods. Mostly these workers are volunteers and most sell family planning methods and other supplies or services, generally with a very modest profit. The APROFAM community-based project found that volunteer promoters were pleased to see how their activities and services helped improve people's lives. For many, this was sufficient motivation while others felt they needed to have some income in order to continue their health care activities.

The community workers carried out their activities in different ways: they made visits to clients' homes or they received clients in their own homes or place of business. The APROFAM and Rxin Tnamet projects found that home visits were an effective strategy for increasing the adoption of both natural and modern family planning methods. Furthermore, promoters who provided a wider range of health services were also found to be a more successful family planning distributors.

Having an appropriate incentive system is important for all types of community workers. Naturally, financial incentives are valued and the determination of appropriate mark-ups for the sale of contraceptives and other basic medicines is critical: prices cannot be too high for generally poor rural families and not too low to provide a modicum of income. At the same time, there are many other kinds of incentives that can provide powerful motivation, including visible and constructive links with the health care system and recognition of services in the form of public ceremonies and certificates. Links to the health care system are important for the establishment of a worker's credibility in his or her community by providing in-service training, supervision, and resupply of methods and medicines. Community health workers who have regular contact with clinical providers are more knowledgeable about family planning and other services, and if they do not run out of needed supplies, they will have more credibility and respect from community residents.

Selection, training and supervision

The selection of community workers is one of the most critical factors that determine the success or failure of community services. The research findings strongly indicate that promoters should be women, and that in Mayan areas these should be Mayan women. The APROFAM research findings indicate that recruitment efforts should consider women with current or previous experience in health-related activities or women who have an established business.

Training community workers should be done using participative techniques that give ample opportunities to practice new skills first in the classroom and then in the community

Once community workers have been selected they must be trained. The high levels of illiteracy prevalent in rural areas present a serious challenge for effective training of community workers. For example, the IGSS research presented the challenge of designing materials to teach the management of obstetric problems, family planning and STDs to non-literate and low literate participants. This was done using simple pictorial materials that were easily understood. The design and content of the materials should take into consideration the worker's established work procedures, while at the same time introducing new knowledge and skills. The high levels of knowledge retention of obstetrics and FP showed that the materials were an effective strategy. On the other hand, the low retention of skills to identify STDs exemplified the difficulties of teaching completely new knowledge and procedures.

Training community workers should be done using participative techniques that give ample opportunities to practice new skills first in the classroom and then in the community. Clearly written and appropriately illustrated manuals and protocols should be used in training and serve as a guide and reference for subsequent community activities. The training of community workers by Rxim Tnamet/PCI illustrated the necessity of field testing protocols to standardize service delivery and educational activities. Nevertheless, effective training techniques that result in demonstrable learning and behavior change continue to be areas that need further study.

The training of community workers needs to be followed by supervision designed to support ongoing activities, identify possible problems, refresh and reinforce skills, and provide in-service training for new skills and activities. The supervision should foster a collegial relationship, so that the community workers and supervisor can freely and candidly discuss all aspects of service provision, promotion and other activities. Supervisory systems are ineffective when the community worker is reprimanded for low service coverage or slow sales, leading to an adversarial relationship without trust and confidence. A major challenge is to create and maintain constructive relationships between supervisors and community workers.

DepoProvera

The OR testing community distribution of DepoProvera is one of the best examples to show the importance of training and supervision for delivery of quality services leading to high continuation rates. The training included personnel at all levels: administrators, clinical staff, educators, field directors and promoters, emphasizing technical skills, including proper preparation of the injection site, needle disposal and management of injection site infection. Project participants were taught how to discuss reproductive intentions, explain to prospective clients the possibilities of side effects and what to do in case of weight gain, spotting, excessive bleeding and amenorrhea.

The importance of bringing services as close as possible to the client

Most of the clients preferred receiving injections in their communities, demonstrating the importance of bringing services as close as possible to the client. If the services are needed appropriately

The fact that over three quarters of the indigenous clients elected to receive services in their communities rather than in a clinic

provided and of high quality, the clients will make more use of them if they are close by than if they are farther away. A unique aspect of bringing Depo to the client in this project was the provision of an extra dose or two to women who migrated seasonally to the coast, enabling them to receive their next injection on time.

A key component of high quality injectable services includes effective counseling, this is true for any method that has frequent side effects or a stringent schedule that may be difficult to comply with. Pre-initiation counseling must be clear and detailed. The provider must ask the client questions to assure her comprehension and voluntary acceptance of the method. Other components of quality injectable services include confidentiality, follow-up of clients to assure compliance and help in the management of any method related problems and providers with good interpersonal relations. The fact that over three quarters of the indigenous clients elected to receive services in their communities rather than in a clinic clearly showed that training health promoters was an effective way to meet the rising demand for injectable contraceptives.

At the same time, care should be taken to the proper selection and supervision of the community distributors. Some technically demanding services can not be provided by any and all community providers. They need to be carefully selected based on pre-determined criteria, which should be periodically reviewed. Close and regular supervision, based on continuing education of the community promoter is critical whenever there is potential for causing problems, such as infections secondary to improper prevention practices.

Home visits

Data from a number of diagnostic studies and research projects indicated that a significant number of Mayan families would like to have health workers make home visits to explain reproductive health as well as attend to other health concerns. The APROFAM re-engineering and Rxii Tnamet/PCI projects incorporated home visits in the strategies that were tested. The main reason why so many Mayans prefer home visits was the increased confidentiality for the discussion of sensitive topics. In Santiago, home visits offered an additional way to educate and provide services to residents who would not go to the clinic and the community workers who made home visits had more clients than those who did not. For the most part, home visits were an effective way to explain the correct use of family planning methods, both modern and natural, educate about side-effects, answer questions, and address problems. Also, home visits were an excellent way to provide services for women confined because of pregnancy, child-birth or illness.

Men were found to be the most appropriate for visits with other men or couples but not with women home alone

In terms of being welcome in the home and not arousing any kind of suspicions, women community health workers were found to be the better choice. For example, in Santiago the male educators who made home visits carried out their activities mainly in courtyards rather than within the living quarters. Women, on the other hand, were invited to enter. Men were found to be the most appropriate for visits with other men or couples but not with women home alone.

Standardization serves to assure adequate educational content and correct technical procedures

It was even more important to come up with innovative ways to assure male participation

Making loud-speaker announcements immediately prior to these events resulted in virtually guaranteed participation

Home visits were also found to have a positive effect on the provision of a variety of health services. In the case of APROFAM promoters it was found that the number of home visits made by educators correlated positively with the sales of analgesics and medicines to treat intestinal parasites, as well as family planning methods. Similar positive correlations were found between educational talks and sales of medicines and family planning methods. In other words providing information and education about health and family planning in appropriate settings have measurable effects on decisions to use basic medicines and a family planning method.

Training during supervisory visits with community workers proved to be an effective way of improving home visits by standardizing educational messages and services. Standardization serves to assure adequate educational content and correct technical procedures. In the APROFAM CBD Operations Research the new training strategy tested included IEC techniques the importance of making home visits, and a wide range of health topics. This training module appears to have resulted in increased sales for the intervention group. Overall, having well trained and supervised community workers who make home visits can help reduce the difficult access to any type of health service and meet the growing demand for reproductive health care in many Mayan communities.

Involvement of men in reproductive health

The operations research to involve men in reproductive health was designed to develop and test new techniques to encourage discussion, active participation, and eventual changes in men's behavior. The diagnostic study showed that men were interested in learning more and the problem was how to promote and teach about reproduction and family planning in ways that result in discussions between husband and wife, an understanding of the negative health effects of having too many children, elimination of misinformation about modern family planning methods, and demand for practicing family planning.

In order to enlist the participation of men, it was not only necessary to work with local organizations and community leaders. It was even more important to come up with innovative ways to assure male participation. A prerequisite was to have creative personnel to design activities, recruit male participants and carry out the activities. One of the most important lessons learned from this operations research was that it is not enough simply to assemble men and talk about reproductive health. It was necessary to use recreational activities to create interest and participation prior to any specific and more serious discussion of reproductive health and related issues.

For example the use of games rope-pulls dramatizations and a staff member dressed as a clown proved to be entertaining to men, women and children. Making loud-speaker announcements immediately prior to these events resulted in virtually guaranteed participation. Some words of caution must be said about using innovative

approaches. The program must be careful not to lose the objectives and themes related to reproductive health while entertaining and capturing the attention of men. After all, the goal is to educate and inform about health, birth spacing and family planning methods. The Quiché operations research was able to generate interest and participation, while making measurable changes in both knowledge and reproductive behavior of men.

Bilingual teachers

The operations research demonstrated that it is feasible to recruit and train bilingual teachers to give courses in reproductive health and related issues for community residents. Using teachers is a low cost alternative strategy for local health education programs and Mayan adults regularly attended the classes and demonstrated interest in learning about health as well as other subjects important in their daily lives.

Lessons learned included the importance of recruiting only motivated teachers who truly want to teach the courses and not individuals who are only motivated by financial gain. Having tests to determine each teacher's eligibility to participate served as an effective means to screen out those whose learning did not reach the standards established by AGES. After each candidate took an exam based on a set of independent readings, those who passed then attended the 12-hour training course and were certified to teach courses in reproductive health. This selection process reduced the number of participating teachers, but at the same time, the motivated teachers were quite successful recruiting students and giving complete courses. The use of teachers who were able to carry out the project activities brought down the overall cost of training each teacher and relatively large enrollments reduced the cost per student in the participating communities.

The operations research also found that many of the community residents who took the courses were also willing to make financial contributions to help offset the cost for supplies and other administrative expenses. The fact that students were asked to make a payment no matter how small did not affect course attendance. In other words, there was sufficient interest in learning more about reproductive health for students to be willing to make a small payment, but there were no data on how much people would have been willing to pay.

Although this operations research was designed to educate about reproductive health, the structure and methodologies used could be applied to many different types of education. For example, the classes could teach about domestic hygiene, home treatment of diarrheal disease in children, alcoholism and domestic violence to mention only a few. Of course, the key to success of an educational program based on the model tested by AGES is to recruit and use only motivated teachers who can organize and give complete courses for rural Mayans.

Using teachers is a low cost alternative strategy for local health education programs

The key to success of an educational program is to recruit and use only motivated teachers



It is important that clinical personnel who provide reproductive health services come from the local community, share local cultural values and speak the local language

It is essential that providers who have been trained to offer reproductive health services not show reluctance or shame when discussing family planning

Increasing demand may very well turn out to depend on having a wide mix of different strategies in both community and clinic

Integrated maternal child health service provision can increase coverage while at the same time substantially reducing costs

IV. Clinical Reproductive Health Services

In spite of the demand for curative services it is still possible to provide preventive reproductive health services to indigenous communities in clinics. It is important that clinical personnel who provide reproductive health services come from the local community, share local cultural values, and speak the local language. Furthermore, it is important that the health care providers themselves be users of the same family planning methods they promote to the community. Being users serves as an assurance for women who seek confidential information that their questions will not be taken lightly or rejected, gives credibility for the family planning methods, and creates feelings of empathy for current and potential family planning users. It is essential that providers who have been trained to offer reproductive health services not show reluctance or shame when discussing family planning. Clinic personnel who speak frankly and openly about family planning have more users than other personnel.

The operations research with Rxii Tnamet showed that there was a perceived need for birth spacing within the conservative Tzutujil speaking populations of Santiago Atitlán and San Juan la Laguna. If family planning services are designed to respond to the expressed desires of this local population, the perceived need to space children can be converted to a measurable demand for both natural and modern family planning services. The services statistics showed a steady increase in the number of users, especially with the introduction of DepoProvera.

The positive results of the operations research were achieved by training and supervising existing personnel. The increase in family planning demand was the result of using a wide range of educational and service delivery strategies, each directed to a distinct segment of the population. In other words, increasing demand may very well turn out to depend on having a wide mix of different strategies in both community and clinic.

The operations research testing the use of an algorithm for systematically assessing clients' needs and the related cost analysis showed that integrated maternal child health service provision can increase coverage while at the same time substantially reducing costs. The algorithm is a useful job-aid that can be quickly learned, and proper and consistent use will significantly increase the number of services provided. Some providers felt that it took additional time to use the algorithm, but the research found that the actual additional time was on the average only one minute, apart from the time saved from not having to attend an additional consult. For the benefit of clients, integrated services require less time away from the home and less interruption of other activities.

When the training was carried out in service and with direct supervision and immediate feedback, the results showed very large gains in service delivery

One of the most important lessons learned from this operations research was the use of an alternative training methodology. In the first phase of the operations research, the traditional training workshops held in a central location were used to train health personnel and the subsequent service delivery data showed no significant differences between the control and intervention groups. When the training was carried out in-service and with direct supervision and immediate feedback, the results showed very large gains in service delivery by the intervention over the control groups. The in-service training/supervision methodology was found to be much more effective than the usual training workshops in changing provider behavior leading to regular use of the algorithm.

The cost study went straight to the core of how the MOH is organized, staffed and equipped to provide maternal child health services. MOH health centers and posts generally provide only the specific curative services requested by patients, while other routine and preventive services such as family planning, immunizations and well baby care are often given at certain times on specific days. The data from this operations research clearly showed that many missed opportunities for providing needed services can be drastically decreased when all needs are systematically assessed. The increase in immediate costs is minimal while there is a decrease in the long run. The data support the current efforts of the MOH to improve the quality and efficiency of services through integration.



V. Recommendations

Taking into account the major findings and the lessons learned these recommendations are intended to help in the design of additional operations research and reproductive health services. The intent is to incorporate valuable lessons, avoid many of the problems encountered since 1994, and better tailor services to meet the needs of the Mayan population.

The view from the community

- 1 Because of the cultural and linguistic complexity of Guatemala, review all relevant studies and reports that provide reliable and recent information on the perceived needs for reproductive health services and how local populations would prefer to have services delivered.
- 2 In cases where no information is available and with the cooperation of local organizations, determine what are the perceived needs for health services and which strategies for the delivery of services the population would favor. If a rapid diagnostic study is to be done prior to the implementation of service delivery, it is imperative to make sure that any data collected are representative of the population to be served. When populations are heterogeneous in terms of both ethnicity and social indicators, major differences in beliefs and perceived needs should be identified.
- 3 Efforts should also be made to determine what services residents would like in addition to reproductive health.
- 4 Determine the community's preferred profile for its community health workers. Studies to date have been in agreement on the gender and type of individuals who are considered the most appropriate, but because of distinct differences among ethnic and linguistic groups, these characteristics should not be taken to be the same for all Mayans.

Community service delivery

- 1 One of the most critical areas for any kind of community service provision is the selection of appropriate and acceptable local residents to be health workers. The selection process should be based on the profile for the ideal health worker as provided by a representative cross-section of residents. Care should be taken not to select individuals from one local political or social faction that would reduce acceptability for the majority. Local organizations, such as development committees or parent-teacher associations or similar groups, should be recruited and encouraged to take part in the selection process.

- 2 Once the community health workers have been selected the next and equally important area is training. Training has to be designed and carried out using methods to insure that proper procedures are followed for the delivery of quality services. Most commonly training is done using workshops to train trainers who in turn train groups of community health workers. Standard training methods include active participation, role playing, and practice in both workshop and community contexts. The inherent weakness with such an approach is that there is no guarantee that what has been taught will be the practices used in the community. Efforts should be made to identify and use training methodologies that have proven to be the most effective for training.
- 3 The training of community health workers should include the use of standardized procedures using appropriate protocols and/or algorithms like those developed by Rxim Tnamet/PCI and the Ministry of Health in Quetzaltenango and San Marcos. Research should be done to determine the most effective design and content for the provision of community services. Efforts should be made to develop materials and job-aids for non-literate and semi-literate community health workers.
- 4 Financial resources and human capital should not be committed for training community health workers unless adequate supervision, follow-up and periodic retraining are also part of the program. Supervision should be designed to identify and solve problems, observe the work of the community health worker, and get feedback from clients and other local residents. It should be sufficiently frequent to guarantee the use of correct procedures. Refresher courses are important for the community health worker to feel part of a program as well as teaching new skills. Supervision and retraining contribute to the establishment of local credibility and respect. Local residents take note of community health workers who have frequent constructive contact with outside professionals and organizations.
- 5 The design of a community program should consider the possible advantages of integrating a variety of services. For example, the APROFAM CBD research demonstrated the advantages of selling antihelminths and other medicines for increasing contraceptive sales. Other combinations should be tested to determine the most effective mix of integrated community services.
- 6 Whenever possible, community health workers should be trained to make home visits and give group talks. Special care should be taken to train community health workers in how to interact with residents, how to behave in the home, and how to motivate residents to ask questions and how to clarify doubts and rectify misinformation. Again, the APROFAM CBD project confirmed the beneficial effects such activities had on

increased services and the Rxii Tnamet/PCI project showed the positive results of a male educator giving talks and making home visits to men and couples

- 7 Because both diagnostic studies and operations research demonstrated that Mayans are interested in learning more about natural family planning community health workers training should include fertility the menstrual cycle periodic abstinence and LAM with an emphasis on how to give understandable explanations to non literate Mayans
- 8 Because of the high demand among Mayan women who opted for DepoProvera services in their communities rather than in clinics, volunteers should be trained to provide quality services that include proper use and disposal of syringes keeping services private, counseling on possible side effects and making sure that clients who want to continue are reinjected at appropriate times
- 9 Because of the popularity of DepoProvera among Mayans both public and private service providers should be encouraged to provide community services in addition to the clinic
- 10 More efforts should be made to set up and maintain effective referral and counter referral systems between community health workers and nearby clinics The IGSS study showed that traditional birth attendants benefitted from having links with the local IGSS clinic and that patients were referred for services The same was true for the community component of the Ministry of Health operations research in Quetzaltenango and San Marcos Making strong two way links between the community and the clinic will lead to better community relations more effective community health workers and greater demand for services but better ways to establish active links need to be found
- 11 Efforts should be made to involve men in reproductive health and family planning activities The lessons learned in the APROFAM operations research showed the importance of recreational activities to get men s attention and participation

Services at the clinic

- 1 Clinic staff are often the greatest barrier to providing a full-range of reproductive health services, and they need training in reproductive health, the menstrual cycle, fertility, and natural and modern family planning methods. Research has shown that the challenge of changing service providers' long- and strongly-held views about reproductive health and family planning. Efforts must be made to design training strategies that will result in the sustained use of appropriate clinical procedures.
- 2 As with community health workers, more effective methods to train clinic staff must be found. The in-service training and active supervision method used in the second phase of the algorithm research provided encouraging results, but additional research is needed to develop further this type of training methodology. The critical juncture remains the correct and sustained use of new knowledge and procedures. Training and supervisory methods need to be standardized for application to a wide range of clinical settings, both public and private.
- 3 Clinic staff should receive training on how to give clear and understandable explanations about family planning methods and possible side-effects to Mayan clients, and providers should be taught the importance of maintaining strict privacy and client confidentiality. Furthermore, all clinic staff should learn to treat community health workers with respect whenever they come to the clinic for whatever reason. Without a better clinic/community relationship, functional referral systems cannot be established and maintained.
- 4 The use of algorithms or similar job-aids to standardize and integrate services should be expanded but under controlled conditions. For example, additional experimentation should be done with different models of integrating services, including additional reproductive health and maternal child health services. The use of the algorithm by NGOs should be examined.



Section Two *Research Summaries*

1 The Population Council Diagnostic Study of Family Planning Services and Users/Non Users in the Mayan Highlands of Quetzaltenango

The purpose of the Quetzaltenango diagnostic study was to assess knowledge, attitudes, and practices of family planning users and non users traditional birth attendants (TBAs), and community leaders. The data were used to design the operations research project to improve reproductive health services in Quetzaltenango. The study showed how community residents feel about family planning where they would like to receive services and in the case of family planning users, how satisfied they are with the services they are receiving. In addition, the interviews with TBAs and community leaders were not only included to see how these individuals feel about family planning but also to determine their willingness to participate in family planning programs as service promoters referral agents, and possibly as service providers.

The most popular methods reported by the family planning users were pills and condoms but only a little over half received explanations on how the methods function about possible side-effects and less than half were told where to get future supplies nevertheless, almost all knew where to get methods. These findings indicate a lack of appropriate counseling for current users. In view of findings from an earlier study by INCAP showing deficient provider knowledge and inadequate training in family planning the statements made by the family planning users suggest that many Ministry of Health services dispense contraceptives but need to improve the quality of their patient education.

The interviews with the 203 non users of family planning showed that their reproductive intentions and ideals were similar to the family planning users i.e. the ideal number of children is four and there should be at least two years between each child. The principal reasons cited for not using family planning included negative health consequences for women and a lack of information regarding method use function, and possible side effects. Relatives friends and neighbors were the principal sources of information about family planning followed by MOH mass media and APROFAM. Generally the respondents agreed with the practice of birth spacing and recognized the health economic social and family benefits of spacing births.

The non-users knew about available family planning services in their communities and the methods provided by these services. In spite of this rumors and misinformation abound and are the primary barriers preventing interested people from using a method. Furthermore, many non users expressed an interest in receiving more complete information about family planning, MOH personnel such as doctors and nurses were suggested as the most appropriate for disseminating information but community leaders TBAs and others were also mentioned.

TBA knowledge of family planning was found to be relatively low and most did not know where methods are distributed or sold. TBA knowledge about family planning methods was incomplete and often incorrect and TBAs were not aware of the contraceptive benefits of exclusive breast feeding. Sexual abstinence was the most frequently recommended method to avoid pregnancy.

The TBAs said that a lack of information on the part of women and couples was the principal reason why children were too closely spaced. Three-quarters of the TBAs interviewed wanted to receive training in family planning methods, including modern methods as well as natural, and most of these TBAs were also willing to give family planning information to their clients, promotional talks to interested people in their communities and make referrals for services, a little over half the TBAs also expressed willingness to distribute family planning methods providing they received the appropriate training.

The community leaders interviewed displayed some knowledge about a limited number of family planning methods, primarily oral contraceptives and injectables, but in contrast to the TBAs the leaders did know where to obtain or purchase methods. Lack of information about family planning methods was cited as the main barrier within their communities preventing more people from spacing the births of their children. Most of the respondents expressed willingness to receive training in family planning, especially natural methods and said they would collaborate with family planning programs, most were willing to give promotional talks to groups and refer for services. Many were also interested in participating in the provision of family planning services.



2 **Universidad del Valle en Guatemala Study of Cognition and Speech Patterns of Urban and Rural Indigenous Community Residents About Reproductive Health in the Department of Quetzaltenango**

The UVG study of a Mam speaking municipality in Quetzaltenango found that, contrary to general belief, adult men and women talked freely about sexual matters irrespective of their marital status and gender. Both men and women lacked anatomical and physiological knowledge about the reproductive organs. Lack of knowledge about the fertility cycle and when a woman was most likely to become pregnant was also very extensive. Both men and women related the risk of pregnancy to the frequency of sexual intercourse rather than to any period in the menstrual cycle, very few were able to identify a woman's fertile days.

Women tended to exaggerate men's sexual desires and behavior. Men somewhat exaggerated women's desires but they thought that women are controlled by society. Contrary to what has usually been suggested, men are far more modest about their sexuality than women think they are. These data suggest two erroneous generic ideologies: women's view of men's machismo in sexual terms and men's ideology of female purity.

The sexual act takes place frequently but under stressful physical and social conditions in an unimaginative way, individually oriented and often with little satisfaction, particularly to women. Sexual relations take place in a room shared by many family members and in a conjugal bed often shared by one or more children under 5 years of age. Heavy clothing (*Corte and huipil*) worn to bed by most Mam women tends to hinder full body contact; caresses by men are few and foreplay is limited or non-existent. A large percentage of women complain about infrequent sexual intercourse and lack of satisfaction when it occurs; many men also indicated a lack of sexual satisfaction.



3 APROFAM Baseline Study of Reproductive Health Beliefs and Attitudes of Males in Four Health Districts in the Department of El Quiché

The APROFAM diagnostic study found that men believe a woman who gets pregnant soon after her wedding is considered healthy and if she does not get pregnant, something is wrong with her. For subsequent pregnancies, some men considered the spacing of children to be good for the health of the mother and the children. Others disapproved of the spacing of children, arguing that the man generally desires more children, prefers to see his children grown up while he is still young, or sees his children as support when he reaches old age. A few men even saw birth spacing as something the ladinos (non-indigenous Guatemalans) did to eliminate or reduce the Mayan population.

Almost all the men perceived the advantages of birth spacing in terms of lower household expenses, better care for the children, and less work for women. They agreed mothers would enjoy better health, have a reduced workload, and have more time to take care of the children; children would benefit with better care and health. Therefore, the findings are paradoxical, although almost all the men recognized the benefits of birth spacing to the family, mother, and children, many disapproved of modern family planning methods.

Focus groups found that men knew very little about the fertile period of the woman. The majority did not know if there is a specific time that a woman is more likely to become pregnant, and the few who said there is a specific fertile period rarely knew the correct time in the woman's cycle. Regarding male fertility, most said men are fertile at any time. Regarding contraception, the pill was mentioned most often, followed by the *operacion* (sterilization) and condoms, but at the same time many expressed negative rumors such as "the pill gives you cancer" or "with the *operacion* (female) it is easy (for the woman) to be unfaithful."

Most said men make the decisions about the number of children to have and the use of family planning, saying that it is customary for the man to make decisions; the man commands the woman, his decision must be respected, and men think better. Nevertheless, some emphasized the importance of shared decision-making regarding spacing of births. Of the few who said they were using a family planning method, prolonged abstinence predominated, and only a few individuals were using a modern method. Among the non-users, the most common reason cited for not spacing their births was lack of information. Only a small minority gave religion as a reason.

Most men wanted more information about birth spacing, citing their lack of knowledge and their interest in making their own decisions. When asked how information should be provided, half suggested group talks, one quarter recommended movies, and a small minority expressed interest in home visits. A few men requested that the activities should be in the K'iche' language. Most of the men said they would participate in these activities and recommended that the talks should take place in a local public meeting room (such as schools, municipal building, or health center), while a few suggested a private home.

When queried what the theme of the talks should be, the men suggested many topics in addition to birth spacing, including vaccination, family health care for children, communication between family members, care for pregnancy, cholera, nutrition, and sexual education.



4&5

Rxiin Tnamet/PCI Increasing Knowledge and Skills of Reproductive Health Service Providers in Two Conservative Indigenous Communities on Lake Atitlán & Testing Reproductive Health Service Delivery Strategies in Two Indigenous Communities on Lake Atitlán, Guatemala

Women in Santiago felt women and children became ill most frequently and had to take care of themselves in rare cases husbands would provide care. The most common cause for a woman's illness was having many children followed by malnutrition, getting married too young, not being able to take care of themselves because of having had so many children, being generally rundown, and having a 'deteriorated body' from having had too many children. Ill women with some financial resources will go to a doctor, but most seek advice and treatment from the TBA (*comadrona*) followed by the witch doctor (*brujo*), the Ministry of Health center, the hospital in Sololá, and the pharmacy. The most common reasons why women die were inadequate care during childbirth, taking medicines to induce abortion, and simply being pregnant. To improve their health, women should learn about the importance of birth spacing.

Some of the women said that family planning was beneficial, while others said that it was a sin and that husbands do not accept family planning. The most extreme opinion was that family planning was very much like the military, designed to kill. Women felt that both the husband and wife should decide how many children to have, but at the same time, women should tell men that it was best to have fewer children. Women agreed that men know very little or nothing about family planning.

Home visits were made to pregnant/post partum women to inform them about services for their condition. Home visits to men and couples were developed to inform about reproductive health services for men, non-pregnant women, and couples of reproductive age. In addition, short radio spots were also broadcast by a local station to inform about services available at the clinic. Activities were also carried out to increase access to family planning services using male educators who trained couples in their homes in how to use natural family planning methods (focus groups indicated that men wanted to receive this information in their home together with their wives), pregnant and post partum women were trained in lactational amenorrhea techniques during home visits, and midwives were trained to instruct women in the use of the cervical mucus method.

The cervical mucus method, locally known as *control*, was the method most socially and culturally acceptable, but since there was little or no knowledge of when a woman is fertile during her menstrual cycle, this method was the most difficult to teach to interested couples. However, it turned out to be an excellent opportunity to engage women and couples in conversation about all family planning and the benefits of birth spacing.

When Rxiin Tnamet proposed that the community volunteers start making home visits to promote and inform about birth spacing, the volunteers protested saying that this was more than they could do, especially since they received no remuneration. The volunteers also felt that women would not accept home visits and as a result, Rxiin Tnamet decided to have the community supervisors make the home visits.

As it turned out, local women welcomed the visits, and the qualitative evaluation also confirmed the fact that home visits were welcome. However, privacy during home visits proved to be difficult, creating a problem for discussing sensitive topics related to family planning. When the supervisor was a man, the home visit took place outside to avoid any appearance of impropriety resulting in rumors.

The home visit strategy turned out to be quite successful and an excellent method to provide information, particularly to women who were confined to their homes because of pregnancy or a new baby. In order to use this strategy, organizations and agencies should examine their criteria for selecting community volunteers, making sure that they are women who can speak more privately and with greater confidence to potential family planning users.

Baseline studies and the strategy of male educators to make promotional home visits have confirmed that men like to learn about family planning and reproductive health from other men. Specifically, men who are well respected in their communities and are known to be experts in the field of health and family planning were found to be in great demand to make home visit to inform and discuss the advantages of birth spacing.



6 APROFAM: Injectable Contraceptive Service Delivery Provided by Volunteer Community Promoters

The purpose of this operations research was to test two service delivery strategies to provide Depo Provera (DMPA) through APROFAM in four departments. The first strategy was to provide DMPA through the APROFAM clinics where the service was provided by doctors and nurses, and the second using trained community based distributors (CBDs). Data were collected to measure differences in acceptance, and continuation rates for the two strategies, and the principal hypothesis tested was that high quality contraceptive services can be safely offered at the community level and will result in an increase in new contraceptive clients and not simply a change in method.

A total of 160 promoters were trained in how to provide DMPA services. Within four months, the total number of new DMPA users surpassed 600. Between June 1995 and the end of September 1996, a total of 1,192 women received services. Of these, 500 were Mayan, and 83% of these women received services in their communities, as compared to only a little over half of the ladina clients. In other words, the results of this OR strongly suggest that a community based strategy is an appropriate way to serve Mayan women with this family planning method.

The 1-year continuation rate in the use of DMPA was over 90%. Clinic and community continuation rates were not significantly different, nor were the rates between ladinas and Mayans. Sixty-five percent of the women who participated had never used a method, suggesting that the OR did not simply result in a change of methods, but did, in fact, recruit a significant number of new users. Of all new users, 53% were ladinas and 46% Mayans.

The results show that trained community personnel can safely and acceptably provide injectable services in their communities, community services were more popular with Mayan clients, while ladinos were split almost evenly between the clinic and community volunteer, and Depo was highly acceptable to Mayan women.



7 APROFAM Reengineering the Community-Based Distribution Program

The purpose of this operations research was to design and test strategies to improve APROFAM's Community Based Program, now renamed the Rural Development Program. It was implemented in three phases. In the first phase existing information was compiled and analyzed. In the second, a diagnostic field survey was conducted which provided a basis for the design of strategies to be implemented. In the third phase three strategies were tested: selection of personnel, training, and a new Management Information System (MIS).

The diagnostic phase developed a profile of the active community promoters and a profile of the ideal promoter from the point of view of Mayan women in the highlands. While active and ideal promoter profiles were largely the same on a national level (except for the issue of language), in Mayan areas the active promoters tended to be men in a much larger proportion than in ladino areas. The ideal profile is presented below:

- Woman
- Age: minimum 25 years
- Married or in union
- With children (so she understands the clients' experiences)
- Speaks the language of the community, ideally a member of the community or someone who shares the culture
- Well-trained
- Able to address various health problems
- Has the respect and confidence of the community
- Continuously available and with time to attend to users/clients
- Aware of the importance of confidentiality
- Good interpersonal relations
- A family planning user or supporter

This became the profile for new promoters to be recruited for participation in the community-based operations research project. It also indicated a need to train community volunteers in a wider range of health care services.

When promoters were asked about what activities they are not currently doing but would like to do, almost half said they would like to do family planning promotion, give talks, and be able to distribute injectable contraceptives. Many also expressed interest in distributing other medicines such as analgesics and vitamins. Thus, both client and CBD interests converged in a need to broaden the scope of services and training.

A new training strategy was developed that trained educators and volunteer promoters in a wider range of reproductive health topics, not just family planning methods. Although the new training did not result in a greater level of family planning knowledge, it had a large statistically significant effect on sales by some categories of promoters, especially rural Mayan female promoters when compared with a control group that did not receive the training. Sales also had a significant association with home visits and sales of antihelminths, iron supplements, and acetaminophen.

Sales were analyzed to see how many promoters fell in the least productive categories since a reduction in force was contemplated. A total of 1591 CBDs were found to have served the equivalent of four clients or less in a year; they accounted for over a third of the promoters but only 4.6% of sales. They were disproportionately Mayan, but more men than women.

A new methodology for selection of promoters and educators that involved increased community participation was developed and tested. Emphasis was to be given to recruiting couples to facilitate education of the couple, not just the woman. Two additional criteria for selection were established: the post should be open a large proportion of the time, and posts should be established in communities with a minimum of 500 inhabitants (to have at least 50 couples to work with).

The process of selecting new educators and CBDs was redesigned to increase community input. The following steps were initially tested:

- the position was advertised
- the database of applicants was reviewed
- five candidates were preselected
- an employment application was completed by each
- cvs were sent to the central level
- three candidates were selected
- the three underwent a field test
- the best candidate was offered the position

The process as described above took longer than necessary, so steps 3-8 were compressed into one day, and the full selection now takes place at the local level. However, the selection is made by more than just the supervisor: input is given also from the community and central level.

A new MIS was developed that succeeded in reducing the amount of paperwork at all levels. The promoter now completes an easy-to-understand one-page form that registers sales (of contraceptives and other basic medicines), referrals, IEC activities, and new users by ethnicity. The educator's paperwork was also cut to one page, and the field director's report was cut from three pages to one. These service statistics are combined in a database with information on the individual promoter. The forms were designed to be easily aggregated by hand, as well as easily input into the database at the central level. The system began to be field tested in January 1997; adjustments were made after the first quarter, and the final version was in place at the end of the research.

While the ideal personal profile of a promoter acceptable to potential Mayan clients is important to the selection of new promoters, it may not provide all the information needed. The new MIS, which combines sales data with information on characteristics of the CBDs, provided detailed information on the personal characteristics of more successful CBDs. Community distributors turned out to have a wide range of different livelihoods and sell contraceptive in many different locations.

In urban areas, the clear leader in sales was commercial establishments, then homes, health care establishments, and others. The highest mean for referrals was for others, followed by homes, health care facilities and finally commercial establishments.

In rural areas, the location with the highest mean sales was the commercial establishment, just like in the urban setting, followed closely by health care facilities, homes and others. Rural clinic referrals were the highest for health care facilities, followed closely by homes.

In addition to selling contraceptives and making referrals to APROFAM clinics, many promoters arrange for their supervising educators to give promotional talks and make home visits. Some volunteer promoters also sell oral rehydration salts, antihelminths, albendazol, vitamins, iron supplements, and acetaminophen. An analysis was made of the number of promotional talks, the number of participants at talks, and the number of home visits, and the amount of medicines in relation to contraceptive sales. The purpose was to see if additional activities had a measurable effect on sales.

The number of home visits by the educator had a positive correlation coefficient of .240 ($p = .000$) and the number attending talks had a coefficient of .222 ($p = .000$) with promoter sales. When non-family planning medications were correlated with contraceptive sales, antihelminths had the highest coefficient of .287 ($p = .000$) followed by iron supplements with .156 ($p = .000$) and acetaminophen with .138 ($p = .000$). A regression analysis indicated that 27% of the sales variance could be attributed to a combination of home visits and the number attending promotional talks. In the case of medicine sales, the sale of antihelminths showed the strongest association with contraceptive sales. This again supported the data that suggest the need to expand integration of training supplies and educational activities.



8 APROFAM: Designing and Testing Appropriate Health Education Strategies for Men in Four Health Districts in the Department of El Quiché

The operations research project was carried out in four municipalities for the entire male population between the ages of 18 through 50. The project staff designed and validated graphic and audio materials on reproductive health, made sure that men understood the basic content and affirmed usefulness for generating discussion and interest among groups of men. Audio materials in K'iche' on reproductive health were produced to be used in the group meetings and were based on the recorded life histories or incidents in men's lives related to family health, birth spacing, natural/modern family planning methods, and parental responsibilities. In addition, a poster was designed depicting an indigenous family from the El Quiché with three children standing in front of an adobe dwelling. The caption at the top read in both K'iche' and Spanish, "your wife will be healthier if you space the births of your children." The posters were strategically placed in the communities where the discussion groups were held.

The research found that getting men to participate was difficult, even with the support and coordination of local leaders and NGOs. In some cases, men expressed little interest in reproductive health and said they were more interested in discussing intestinal parasites and alcoholism. As a result, the research explored other areas of interest to men; the principal health problems that men seek services for at health centers and posts were also determined. Discussion of these problems were then used as a point of entry to the topic of reproductive health and family planning.

The major problems from the very beginning was the low male attendance at scheduled and well publicized meetings. A common reason given by many men was that they were not in agreement with the nature of the activities and that many other institutions had asked for cooperation, but the only result had been to create confusion. Going from house to house or having community leaders announce the time and place of the group discussions proved to be ineffective. A change of strategy was needed.



The idea behind the strategy of recreational activities (*Jornadas Recreativas en Salud Reproductiva—JRSP*) was to find a better means of communication and to increase male participation. From the very beginning the informal activities generated greater interest among men, and attendance increased considerably. After these activities became a regular part of the meetings there was no rejection of any of the topics discussed. To the contrary, many individuals requested that additional themes and activities be developed for their communities. Furthermore, the recreational activities eliminated objections to the presence of women and children.

The research found that one of the best ways to get people to participate was to use portable loudspeakers to announce the recreational activities and to specifically mention that reproductive health was an integral part of the activities. In communities where formal announcements had been made—primarily by community leaders—and no one had attended, the use of loudspeakers quickly resulted in participation by relatively large groups of men, groups ranging from 30 to sixty participants were not unusual.

The recreational activities of interest to men included rope pulls, lotteries, and one of the staff dressed as a clown (*El mago Elias*) to perform magic tricks that included reproductive health messages. Other activities included dramatizations emphasizing the role of men in family health, the family circle, and the distribution of t-shirts with reproductive health messages. Portable loudspeakers placed in markets proved especially effective. The success of this strategy convinced the project staff that such activities are essential to capture men's attention.

9 The Population Council and IGSS Integrated Obstetric, Family Planning and STD Training for Traditional Birth Attendants (TBAs)

In Guatemala, traditional birth attendants are the only or the preferred source of assistance during delivery for 77% of births nationwide. The proportion is even higher in rural areas. The MOH estimates that about 12,000 TBAs have had some training at some time by either ministry personnel or an NGO. Most have no opportunities for continued training, and their supervision has been *ad hoc*, sporadic and often abandoned after the training program ends.

The objectives of this research were to design, test, and evaluate an integrated training strategy that includes FP and STDs for training TBAs, determine if training a group of TBAs in family planning and STDs is an effective strategy to expand referrals for these services, and institutionalize the availability of quality family planning services in IGSS outpatient facilities.

A curriculum was developed that, in contrast to the previous didactic techniques that IGSS used in training TBAs, called for training the trainers in use of participatory adult education techniques. Another innovative aspect was development of a systematized follow-up of the training. A total of 30 trainers and 254 TBAs were trained using the curriculum.

Four supervisory guides were developed. The first covered birth spacing methods. The second covered prenatal problems, the method of lactational amenorrhea (LAM), and genital ulcers. The third covered complications during delivery, the cervical mucus method, and burning during urination. The fourth covered post-partum complications, hormonal family planning methods, and vaginal discharge.

During monitoring the supervising nurses documented the TBAs' practices and measured retention of knowledge using the guides. The guides presented a series of questions that were asked of the TBA, the nurse used a checklist to determine correct/incorrect answers. In general, knowledge retention was at acceptable levels for OB and family planning. Retention of knowledge was lowest for STDs.

A comparison of family planning methods provided in 1995, 1996 and the first half of 1997 demonstrated the expanded family planning services being provided through the IGSS system in Escuintla. An important secondary effect of this project was the approval of DMPA as a contraceptive to be provided in the IGSS system in Escuintla, whereas previously it had been provided only for treatment of cancer and endometriosis. Previously it was allowed only at the level of the regional hospital, while now it is provided in the doctors' offices in the department.

This operations research demonstrated the value of systematic supervision of TBAs, using a standardized tool. Problems are identified and resolved quickly and supervisors can assure that key knowledge and skills are assessed. This can be especially important in health care services that experience high rates of turnover that can harm continuity. Since this is the case in essentially all public sector health services in Guatemala, this lesson should be widely applicable. This OR also demonstrated the value of putting evaluation tools in the hands of the local people. Because the nurses made systematic evaluations of the TBAs' knowledge she could also take immediate corrective action.



10 **ATI Testing the Collaboration Between Two NGOs, ATI and APROFAM, in the Delivery of Family Planning Services**

Discussion groups with Mayan women yielded results on how women feel about their daily lives, relationships with their husbands, and the most important problems in their lives. Furthermore, the groups turned out to be a rich source of qualitative information on opinions and attitudes regarding reproductive health services and family planning. The women provided invaluable information on the perceptions of APROFAM, the services offered, and how these services can be improved to respond to clients' needs. The most frequently mentioned problems in women's lives included the following:

- Women never have any free time, all of a woman's waking hours are consumed by work both in and outside the home.
- Women cannot rely in any way on help or support from their husbands, when the man comes home from work it is only to rest and to eat.
- The husband neither asks for nor takes into account the woman's opinion on any decisions related to the household or the family.
- The husbands decide what discussion groups the women can attend and which ones they cannot, determine the time of return, and generally want to know what went on.
- Many of the women said they have problems handling and managing money they are given by their husbands for weekly family expenses. The amounts they receive are not adequate to cover all basic needs, and as a result women feel they have to contribute as well.
- If the women have such difficulty attending the discussion groups, why do they come? The women said they want to share experiences, become better informed and learn, and because it is restful just to be together talking.

APROFAM's community volunteers should be women because "the male volunteers live badly, and we do not want them to counsel us, they either go with other women or have problems with alcohol." Despite this negative opinion of male volunteers, the women felt that APROFAM should have messages and information directed specifically towards men. Furthermore, many of the women did not know the APROFAM volunteers in their communities, but they did know about the clinic in Quetzaltenango, the women did not have a very clear idea about the services offered and the prices. Despite the negative opinions expressed, the women said they wanted to know about APROFAM's services, where services are provided and at what cost.

In the context of the discussions, the women came up with what they consider to be the ideal community-based distributor of family planning methods and what these volunteers should know:

- The promoter should be a bilingual married woman 35 years of age or older with children of her own
- She should be from a respectable family without a history of violence and alcoholism, and she should have a desire to learn and to talk about family planning with other women
- Her husband should be in favor of his wife being a promoter
- She should be religious, but the specific religion does not matter
- She should be able to explain well. She should not only be able to carry on a conversation but also be a good listener
- The ideal promoter should know about women's health and about all family planning methods, including natural ones. She should know which method to recommend in accordance with a woman's history and preferences, know about side-effects and be able to advise women what to do about side-effects
- The APROFAM promoter should be amiable, discreet and have a private place to see her clients. She should be available to see clients in the morning during market hours and between 2:30 and 4:00 in the afternoon; this is when women can leave their homes without the knowledge of their husbands
- Every single village should have a promoter who knows her community well
- The promoters should know male and female anatomy, the menstrual cycle, and be able to explain the importance of spacing births
- She should have a general knowledge about vaginal discharge and what women can do for treatment
- She should be able to advise women about where to go for treatment of all types of health problems
- The promoter should be able to give information in the context of local culture and beliefs, taking into account the community world view of illness and health. She should be able to respond to myth and disinformation about family planning methods
- She should also be trained in how to initiate conversations with her client. In other words, she must be very discreet in how to broach the subject of family planning and be able to use the appropriate concepts and terms that local women can understand
- APROFAM should publicize their services using mass media such as radio, and the churches that are in favor of family planning should say that "the volunteer that lives in a particular community is a promoter of women's health."



11&12 The Population Council and MOH: Systematic Reproductive Health and Family Planning Services in Quetzaltenango and San Marcos and a Cost Analysis of Integrated MCH Services

Given the fact that most women who go to MOH health facilities do not know what services are available, especially reproductive health and family planning this operations research was designed to test the effects of training health personnel at MOH health centers and posts in the systematic provision of reproductive health and family planning services using an algorithm. The algorithm consisted of a series of questions to be asked of all women of fertile age who came to a health center or post for whatever reason. All the questions were designed to be answered with a simple yes or no, and depending on the answer, the provider would go on to next question or give the appropriate services. In addition to the algorithm, a manual was developed based on current MOH norms that gave step by step instructions on how to provide each service. The goal was to insure that all pregnant women who came to the facility would receive prenatal care and tetanus immunization, their children would get appropriate well baby care and that women who did not want more children and who wished to use a family planning method would receive the method of her choice.

Because women who come the MOH facilities generally have a variety of MCH needs that should be addressed by providers, the basic idea behind the algorithm was to help personnel to systematically explore specific needs and provide appropriate services. Women generally come to the facility requesting services for a single problem, and the use of the algorithm by trained personnel would aid in the identification of other needs and assure services for those needs. Women of fertile age were asked the following six simple questions:

- 1 Are you pregnant?
- 2 Have you given birth in the last two months?
- 3 Do you have child less than one year old?
- 4 Do you want to get pregnant during the next year?
- 5 Are you using and kind of family planning method?
- 6 Would you like to use some kind of family planning method?

If a woman who does not want to become pregnant and who does not want a method, providers were asked to find out why. Depending on how a women respond to these questions, she was to receive the appropriate services: information, educational messages, and appointments to return to the clinic. For example: a pregnant woman would be offered prenatal services, and information about how to detect the signs and symptoms that could indicate a problem; a woman who has had a child in the last two months would be informed about breast feeding, growth and development of her child, immunizations and the use of family planning; a woman who wishes to become pregnant would be examined for reproductive risks; and if she should not get pregnant, she would be informed about family planning. Women who are currently using a method would be asked about satisfaction with the method, side effects, contraindications for use of the method, and whether or not she is using it correctly; women who want to use a method would be counseled as to available methods and be given the most appropriate for her; and women who don't want to get pregnant and do not want a method would be educated about the advantages of family planning, be examined for possible risks were she to become pregnant and made aware of family planning services should she want them in the future.

The first stage of the research consisted of dividing the participating health districts into intervention and control groups and personnel from the intervention districts were trained in the use of the algorithm. After both control and intervention districts had been using the algorithms for about six months a total of 695 women were interviewed as they exited health centers. The interviews found that 11% of the women who went to intervention facilities received additional services as compared to 9% of the controls, these differences were not statistically significant.

After interviewing personnel in the intervention group, it was found that the algorithm was not used in any systematic manner but only as a guide to provide family planning services. The goal of providing integrated MCH services was not considered a priority by providers, and the reasons given for not consistently using the algorithm were not enough time, using it meant taking more time with each patient, and in some cases language barriers.

A second stage of the research was designed and implemented in Quetzaltenango. The objectives were to extend the training and use of the algorithm to all health districts and to evaluate a new training strategy to insure that all necessary services consistently are made available to women of fertile age. The first step was to design a new training methodology that consisted of in-service training, case studies, role play, and direct observation and supervision of service delivery in health centers and posts.

First the nurses from the health districts were given training of trainer courses that included how to teach simulated conventional service delivery with an observer to detect lost opportunities. A check list was used to see if the provider explored the need for additional services, gave information about other services, made appointments for other services, and provided additional services. After the simulation, the number of lost opportunities were presented together with the algorithm. Then another simulation was taught to show how the algorithm reduces the number of lost opportunities.

After the nurses returned to their districts, consultants visited the health centers, spending one day supervising the head nurse's use of the algorithm with patients. The second day, the consultant and the head nurse trained the auxiliary nurses using the same techniques as in the original training of trainers, and on the third day, the head nurse and the consultant directly observed routine service delivery. When the consultant felt that the staff were competent in the use of the algorithm, they received an informal certification. As a rule, the algorithm was easy to understand, proved effective in identifying possible lost opportunities, and took about five hours to learn, but the on-site supervision was essential to instill the necessary skills and motivation to regularly use the algorithm.

To test the effectiveness of the training, the consultants observed service provision by providers before and after they were trained to use the algorithm. Overall, the identification of necessary services more than doubled, and the quality of information given increased dramatically, especially for mothers in how to prevent and treat acute diarrheas and respiratory infections. The most dramatic increases were 500% for acute respiratory infections, 325% for diarrheal disease and oral rehydration, 250% for immunizations of women of fertile age. Post natal checkup increased by a modest 71%. In many of the observed cases, the providers made appointments or referrals instead of providing the additional services during the same visit. In most cases, the reason services were not given during the same visit was because the normative structure of service delivery calls for specific services to be given at certain times on particular days.

Nevertheless, there was a 50% increase in additional serves given during the same visit. The time taken for each visit was measured in both the before and after groups and an average of one additional minute was necessary to properly use the algorithm. Regardless of how service delivery was organized, the use of the algorithm contributed markedly to improve service availability.

In order to have a complete view of integrated service delivery, a financial analysis was conducted to determine the additional cost of providing additional services during a single office visit. This analysis was done by observing and determining the cost of 553 treatments at selected health care facilities in Quetzaltenango and San Marcos. The analysis showed that when the client gets a single service or treatment, the cost is considerably higher than when two or more services/treatments are provided. The costs analysis determined the cost per consult and the additional costs of providing two or more services/treatments per consult for MCH services.

The procedure for the cost analysis included determining fixed annual expenditures on a monthly basis per health center/post, variable expenses for supplies, medicines and other recurrent costs, salaries for administrative and professional personnel, and calculating the cost of each consult for a single versus multiple services. With these data, the cost for single and multiple service consults was calculated, showing the additional cost of integrated MCH services.

The average cost per consult for single services was Q12 35, the cost for a prenatal exam was Q17 14, well-baby care Q12 74, immunization Q5 86, post-natal care Q35 10 and family planning Q23 47. Informing the client about necessary additional services increased the average cost per consult to Q12 54, a difference of Q0 19. Providing two services during the same visit cost an average of Q12 47 per consult, a difference of only Q0 12. In comparison, giving the client an appointment an additional consult increased the cost per consult to Q12 86, a difference of Q0 51, in addition to the full cost of the subsequent consult.



13. AGES: Reproductive Health Education in Indigenous Areas through Bilingual Teachers in Guatemala

The Mayan population, which represents 40% of the total population, is the most under-served in terms of all kinds of health care. Access to reproductive health services and information is very limited. In large part, this has been a consequence of the inability of institutions to incorporate in their programs Mayan staff who can conduct activities in a Mayan language, who live in the indigenous communities and who have the required teaching and learning skills.

In this project AGES designed and tested a strategy for providing reproductive health education to indigenous audiences in Guatemala. The strategy consisted in training teachers of the National Bilingual Education Program (PRONEBI) to teach reproductive health courses in indigenous communities.

The Reproductive Health Education System that was tested was acceptable to a small number of PRONEBI teachers and proved effective in screening out unmotivated and unprepared teachers. In addition, the research showed that PRONEBI teachers can do much of the studying by themselves, reducing training expenses. Acceptability of the courses for the indigenous population was measured by the number of courses taught, the number of students registered, the number of courses where complaints or threats were received by teachers, and student evaluations.

That the courses were successful and acceptability was confirmed by requests from community residents and teachers for AGES to continue giving the courses. Data from different sources show that the courses were very well received by the communities. Residents reported they liked the courses, attendance was good and monetary contributions were made. There were a few problems related to teaching, such as the use of complicated language, but the use of the indigenous language was identified as a very positive factor in the high level of course attendance.

According to the follow-up survey, the courses had a strong effect on participants by increasing communication with partners on sexuality and increased use of modern family planning. Responses to open-ended questions also show that a clear awareness of birth spacing and the rights and empowerment of women. Training PRONEBI teachers proved to be a cost-effective strategy. 496 courses were given for a total of 11,171 students, and the cost of the strategy was of about US \$56.00 for each 10-hour course or \$2.50 per student. This was a modest amount when compared to other more costly types of IEC using shorter often lower quality messages provided by volunteers, clinic staff and through mass media.



The Population Council is an international, nonprofit, nongovernmental institution that seeks to improve the wellbeing and reproductive health of current and future generations around the world and to help achieve a humane, equitable, and sustainable balance between people and resources. The Council conducts biomedical, social science, and public health research and helps build research capacities in developing countries. Established in 1952, the Council is governed by an international board of trustees. Its New York headquarters supports a global network of regional and country offices.